CCTI
HSTW

Building Transitions from High School to College and Careers For Kentucky's Youth

On March 17, 2005, 28 Kentucky state educational and policy leaders participated in the Kentucky Education Forum in Versailles, Kentucky, to discuss ways to improve the ability of students to make successful transitions from high school to postsecondary education and careers. The forum was sponsored by the League for Innovation in the Community College and the Southern Regional Education Board (SREB). In keeping with the intent of the College and Career Transitions Initiative (CCTI), funded by the U.S. Department of Education and administered by the League, the forum focused on the five desired outcomes:

- decreased need for remediation at the postsecondary level;
- increased enrollment and persistence in postsecondary education;
- increased academic and skill achievement at the secondary and postsecondary levels;
- increased attainment of postsecondary degrees, certificates or other recognized credentials; and
- increased entry into employment or further education.

Background information about the status of high school to college and careers transitions in Kentucky was provided in brief presentations by: Gene Wilhoit, Commissioner, Kentucky Department of Education; Keith Bird, Chancellor, Kentucky Community and Technical College System (KCTCS); Scott Hess, Acting Branch Chief, Division of High School, Postsecondary and Career Education, U.S. Department of Education; Larry Warford, Project Director, College and Career Transitions Initiative, League for Innovation in the Community College; and Gene Bottoms, Senior Vice President, SREB. They emphasized the many endeavors under way to strengthen linkages between high schools and postsecondary systems, such as: raising high school graduation requirements; increasing the number of high schools participating in *High Schools That Work* (*HSTW*); implementing of the Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP); and participating in the American Diploma Project, which has established benchmark college-readiness standards.

They also emphasized the work still to be done to increase the preparedness of high school students for postsecondary studies and careers, to create planned programs of academic and career studies that result in a seamless pathway from high school to college and a job, and to encourage persistence in postsecondary studies toward an associate's or bachelor's degree.

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Following these opening presentations, discussion concentrated on three questions:

- What action is needed to reduce college developmental and remedial studies and to raise academic and technical achievement in high school and college?
- How can we increase enrollment in postsecondary education?
- How can we improve persistence in postsecondary education to increase the percentages of students receiving postsecondary degrees, certification or other recognized credentials that improve students' chances of getting good jobs and pursuing further education?

This report organizes the information gathered through the forum by looking at how Kentucky fares in building transitions, what challenges it faces in improving transitions, and what actions it can take to improve high school to college and career transitions.

How does Kentucky fare in building successful transitions from high school to college and careers?

Students' preparedness for college and careers has improved in Kentucky over the past decade. In 2004, 60 percent[1] of high school graduates taking the ACT assessment had completed the ACT-recommended college-preparatory core,[2] compared with 28 percent[3] in 1994, and the percentage of students taking the assessment increased to 75 percent in 2004 from 60 percent in 1994. The mean ACT composite score increased 0.2 points, from 20.1 in 1994 to 20.3 in 2004,[4] even as the percentage of students taking the exam increased. To strengthen the required academic core for all students, the Kentucky Board of Education added geometry as a required course for graduation, beginning with the 2002 graduating class. The percentage of high school students taking at least one higher-level mathematics course — including geometry, Algebra II, trigonometry, pre-calculus or calculus — increased from 39 percent in 1992 to 53 percent in 2002.[5]

Similarly, the percentage of middle grades students who performed at the Proficient or Advanced level on the NAEP mathematics assessment increased from 14 percent in 1992 to 24 percent in 2003.[6]

The state encourages schools to become *HSTW* sites and adopt the initiative's recommended curriculum.[7] As of 2005, 80 Kentucky high schools are *HSTW* sites. In schools where students completed the *HSTW*-recommended curriculum, students were better prepared. In 2004, 42 percent of career/technical (CT) students in *HSTW* schools completed the recommended four credits in mathematics — Algebra I, geometry, Algebra II and above. Their mean score was 317 on the mathematics NAEP-referenced assessment (which is approaching the Proficient level), compared with a mean score of 289 — below Basic — for those who did not complete the recommended mathematics curriculum.[8]

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1 ACT, Inc. *ACT High School Profile Report, High School Graduating Class 2004, State Composite for Kentucky*.

2 ACT academic core includes at a minimum, four years of English, three years of mathematics (Algebra I and higher), three years of science and three years of social studies.

3 ACT, Inc. *ACT High School Profile Report, High School Graduating Class 1994, State Composite for Kentucky*.

4 *ACT Kentucky 1994; ACT Kentucky 2004*, op. cit.

5 The National Center for Public Policy and Higher Education. *Measuring Up 2004, the Sate Report Card on Higher Education: Kentucky*. 2004.

6 Achieve, Inc. *Kentucky Data Profile*, February 2005.

7 *HSTW*-recommended curriculum includes four credits of college-preparatory English, four credits of mathematics (Algebra I, geometry, Algebra II and above), three science credits at the college-preparatory level, three years of social studies, and mathematics in the senior year.

8 *HSTW* 2004 Assessment.

Further, through Bridge Partnership, a project funded by a grant from the Ford Foundation, the Kentucky Department of Education and KCTCS have created partnerships between community and technical colleges in the 16 districts and their feeder high schools to assess college readiness in the 10th grade, thus identifying academically at-risk students earlier in high school so they can make the most of their junior and senior years to become college-ready.[9]

More high school students in Kentucky are getting a jump-start on postsecondary studies. The state's dual-credit programs, Advanced Placement (AP) and distance learning courses give students the opportunity to earn college credit while in high school. Students have access to 34 AP classes, either on site or online, through the Kentucky Virtual High School (KVHS). In 2004, 252 high schools offered AP classes, compared with 190 a decade ago, and more than twice as many students took AP exams in 2004 than in 1994.[10] In 2003, Kentucky ranked 10th among the 16 SREB states[11] in the number of students taking AP exams; nearly 80 percent of Kentucky high schools had students who took at least one AP exam that year. Kentucky administered 168 AP exams per 1,000 juniors and seniors in 2003, up from 122 in 2000.[12]

The number of college-level courses per 1,000 high school juniors and seniors increased fivefold in just six years, from 77 in 1997 to 378 in 2003.[13] Currently, most high school students who want to enroll in dual-credit courses can do so; the number of high school students enrolled in dual-credit courses has increased dramatically over the past three years, from 3,693 in 2000 to 14,396 in 2003[14] — almost a fourfold increase in just three years.

More students are planning to attend college, more are going to college, and the state has a program to help them pay for college. In 2002, 61 percent of Kentucky's high school graduates enrolled in college the following fall, five percentage points more than in 1992 and five percentage points above the 2002 national average.[15] Kentucky is one of only eight states that showed improvement in college participation over the past decade; the chance of enrolling in college by age 19 in Kentucky increased by 11 percent, compared with a 3 percent decline nationwide.[16] Total enrollment in Kentucky's postsecondary institutions increased 26 percent from 1993 to 2003.[17] Enrollment in two-year colleges increased 63 percent in that same 10-year period.[18]

The state has a strong GEAR UP program that begins in the middle grades to encourage college awareness, participation in a college-preparatory curriculum, and college enrollment among disenfranchised students at risk for failing or dropping out of school. In 2003-2004, GEAR UP served 16,458 Kentucky students in grades seven to 10 and was expected to serve more than 22,000 students by 2005.[19]

The state finances the Kentucky Educational Excellence Scholarship (KEES), which helps students attending a Kentucky postsecondary institution pay for college. In 2000, Kentucky began its $5 million public communication campaign[20] to increase enrollment in adult and postsecondary education; in 2004, it launched the Go Higher Kentucky Web portal,[21] designed to help Kentuckians plan, apply and pay for college.

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9 Kentucky Department of Education. *Kentucky P-16 Collaboration: A Review After Five Years*. November 2004.

10 College Board. *AP Summary Reports: 2004 Kentucky Summary*.

11 SREB states include Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

12 SREB. *Goals for Education: Challenge to Lead: Kentucky, 2004*.

13 Kentucky Council on Postsecondary Education. *Key Indicators of Progress toward Postsecondary Reform*. (5.18.05)

14 *P-16 Collaboration*, op. cit.

15 SREB. *SREB Fact Book on Higher Education*, 2005.

16 Kentucky. *2003-04 Postsecondary Education Accountability Report. Reform Snapshot*, December 2004.

17 SREB. *Fact Book*, 2005, op. cit.

18 ibid.

19 *P-16 Collaboration*, op. cit.

20 *P-16 Collaboration*, op. cit.

21 Kentucky Council on Postsecondary Education. Overview. Go Higher Kentucky — http://cpe.ky.gov/policies/academicinit/GoHigher/.

Kentucky believes in the power of educational pathways that lead to further study and a career. To help students, Kentucky has outlined career pathways starting in ninth grade that stress a coherent sequence of academic and CT courses in broad fields. Beginning in 2002, Kentucky required students to complete an Individual Graduation Plan, a four-year curricular plan that emphasizes academic and career development, helps students set learning goals based on academic and career interests, and provides a pathway through high school to postsecondary studies and a job.

Employer-based credentials are a part of Kentucky's high school and postsecondary standards. Kentucky has developed occupational skill standards and assessment exams in 19 occupational areas. The standards are based on what employers indicate students should know and be able to do to qualify for entry-level jobs. In 2004, more than 13,000 high school students participated in Kentucky's Occupational Skill Standards Assessments,[22] with 40 percent earning industry-endorsed skill standards certificates, compared with only 14 percent in 2000.[23]

Kentucky also has a goal to link every associate's degree to a recognized industry credential. KCTCS created the Kentucky Employability Certificate — based on WorkKeys test results — to bring educators and businesses together. This certificate serves as a bridge for job applicants, incumbent workers, educators, training organizations and Kentucky businesses. To date, more than 1,500 employability certificates have been awarded to Kentuckians.[24] Kentucky's public universities, colleges and technical institutes awarded 5,758 certificates in 2002-2003,[25] compared with 3,811 in 2000-2001,[26] including certificates that require less than two years of study and certificates that require two years of study but less than four.

Postsecondary institutions in Kentucky have agreed upon college-readiness standards. Kentucky is one of several states in the American Diploma Project (ADP). As a part of this initiative, the state mapped high school English and mathematics content to ADP standards for college and workplace readiness. In November 2004, the Council on Postsecondary Education adopted a statewide public postsecondary placement policy[27] based on college- and workplace-readiness standards in mathematics and English that encompass the knowledge and skills all high school graduates need in order to succeed in further study and careers. All public higher education institutions in Kentucky are required to guarantee placement in credit-bearing courses to any incoming student — high school graduate or adult learner — if the student is able to demonstrate specific threshold levels on the ACT English and mathematics exams. At present, students can take dual-credit courses while in high school without having to meet these readiness standards.

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22 Kentucky Department of Education. *Cross-Reference — NGA Agenda to Kentucky Activities*. Gene Wilhoit, Commissioner. Version 5: March 14, 2005.

23 Kentucky Department of Education. Division of Career and Technical Education. *Career and Technical Education Update 2005: Technical Skill Achievement of Career and Technical Education Concentrators*. February 8, 2005.

24 ACT, Inc. WorkKeys, State Initiatives: Kentucky. 2005 — www.act.org.workkeys/initiatives/kentucky.html.

25 SREB. *SREB Fact Book*, 2005, op. cit.

26 SREB. *SREB Fact Book on Higher Education*, 2003.

27 Kentucky Council on Postsecondary Education. *Statewide Public Secondary Placement Policy*. November 8, 2004.

What challenges does Kentucky face in improving transitions from high school to college and careers?

Improving persistence and completion rates in two- and four-year institutions — While more Kentucky high school students are better prepared for college than a decade ago, persistence and completion rates at Kentucky's public two- and four-year colleges have improved little, if at all. While an increasing percentage of students are entering college, many are not well-prepared, which means many will not graduate unless they are given special attention. Compared with the 1998 cohort of students, the persistence rate decreased four percentage points for Kentucky's 2001 cohort of first-year students enrolled in public two-year colleges, while it increased one percentage point[28] in SREB states as a whole. Only 61 percent of the 2001 cohort persisted and returned a second year to continue their studies at community and technical colleges. The persistence rate was stronger among freshmen at four-year institutions, increasing five percentage points from the 1996 to 2001 cohorts, with 84 percent returning their sophomore year, compared with 85 percent across all SREB states.[29]

Graduation rates were even lower for both two-year and four-year groups of students. Based on first-time freshmen entering college in 2000, Kentucky's three-year graduation rate for public two-year colleges declined another percentage point from the 1995 cohort. In all, 9 percent of students in the 2000 cohort at public two-year colleges graduated, compared with 14 percent across all SREB states. The six-year graduation rate at Kentucky's four-year colleges and universities was 45 percent for the 1997 cohort, up four percentage points from the 1992 cohort, but below the 47 percent rate across SREB states.[30] These low completion rates are an economic concern because today's jobs require postsecondary credentials. In order to reach the national average for adults with a bachelor's degree in 2020, Kentucky will have to double the number of baccalaureate-holders in the state over the next 15 years, and some still may have to come from out of state.[31]

Actions Kentucky can take:

- **Identify and implement "best practices"** strategies for improving student persistence and completion in community and technical colleges and in four-year colleges and universities. One example is enrolling students in a college-level course that is designed to help them see the benefit of acquiring an associate's degree or further study, freshen up their study and time management skills, and develop strong relationships with the college.
- **Track student persistence rates** by following students who go from high school to college and those who transfer from one institution to another. The purpose is to link student outcomes to academic preparation and services received. States may need to develop common student identifiers that link K-12 education with higher education.
- **Develop programs that reflect the needs of student groups**, such as first-generation and nontraditional students, who are considered to be at risk for completing postsecondary studies.
- **Improve the quality of remedial courses** by having the best teachers teach these courses and allowing students during the first semester to take courses in their major as a way to enhance learning and motivate students to stay focused on completing their programs of study.
- **Incorporate employer certification exams** into the mix for determining completion rates in two-year community and technical colleges and ensure that these certifications are knowledge-based, standardized and graded independently of the school; administered on a multistate basis; and recognized by industry, trade or professional associations.

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28 SREB. *SREB Fact Book*, 2005, op. cit.
29 ibid.
30 ibid.
31 Gene Wilhoit, Opening Presentation. Kentucky Education Forum, March 17, 2005.

- **Hold two-year community and technical colleges and four-year colleges and universities accountable for increased persistence and completion** by establishing institutional-level accountability indicators, setting annual goals for the indicators, reporting progress, granting awards to institutions that meet goals and applying sanctions to those that do not, and providing targeted assistance to help institutions achieve the goals.

Improving student preparedness for college and careers — A key indicator of student readiness for college and careers is the rigor of the student's high school curriculum. While the percentage of Kentucky students who took ACT's recommended core increased from 28 percent in 1994 to 60 percent in 2004, the mean composite score for students completing the ACT core decreased from 21.4 to 21.1 in the same 10-year period. This suggests that the core is not being taught to rigorous standards. However, the state's mean composite score for all students — regardless of their completing or not completing the ACT core — increased 0.2 points in the past decade, with a 30 percent more students taking the exam in 2004 than in 1994.[32] In 2004, the mean composite ACT score for Kentucky was 20.3, compared with 20.9 for the nation. Although moving in the right direction, Kentucky continues to lag behind the nation on ACT scores.

Compounding this issue is the fact that ACT itself has concluded that its core is not adequate for college readiness and now recommends increasing mathematics to four years.

Even though the majority of high schools offer AP courses, only 9 percent of Kentucky's juniors and seniors took an AP exam in 2003. In 2003, there were 168 AP exams per 1,000 juniors and seniors enrolled in Kentucky's public and private high schools, compared with 79 exams per 1,000 in 1995.[33] The number of AP exams increased during this interval, but the percentage of students scoring 3 or better declined. In 1995, 48 percent of Kentucky students who took an AP exam scored 3 or better, compared with 45 percent in 2003.

While more of Kentucky's students are taking demanding courses, 40 percent did not complete ACT's recommended core in 2004. Some students do not complete a rigorous curriculum because the system permits it.[34] Some push back from high-level courses and take lower-level ones to get better grades because of the Kentucky Educational Excellence Scholarship (KEES) grade-point average (GPA) requirements. Based on college-readiness data from the Manhattan Institute, only 41 percent of Kentucky's 2001 high school graduating class was college-ready,[35] which means the remaining 59 percent would have needed remedial course work if they enrolled in college. Even though postsecondary institutions have agreed recently upon standards and cut scores on the ACT[36] for preparedness for college, a process for determining college readiness in language arts/reading and mathematics of **all** high school students is not embedded in the state's high school assessment.

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32 *ACT Kentucky 2004*, op. cit. SREB. Education Policies, Goal 5. Internal ACT/SAT data files.

33 SREB. Education Policies, Goal 5. Internal AP data file. This is the number of exams taken in the year by 11th- and 12th-grade AP candidates (number of exams not shown), divided by the states' 11th- and 12th-grade enrollment x 1000.

34 Jim Applegate, Council on Postsecondary Education. Comments at Kentucky Education Forum, March 17, 2005.

35 Green, Jan P. and Greg Forster. "Public High School Graduation and College Readiness Rates in the United States." Manhattan Institute, *Education Working Paper*. Number 3, September 2003. Three components of the college-readiness rate: 1) the student must have completed high school; 2) the student's high school transcript must include four years of English; three years of mathematics; and two years each of natural science, social science and foreign language; and 3) the student must score at least at the Basic level on the NAEP reading assessment.

36 Statewide Public Secondary Placement Policy, op.cit.

Actions Kentucky can take:

- **Require a rigorous, college-preparatory curriculum** be taken by all students that includes: four credits of English — requiring students to read eight to 10 books a year and demonstrate understanding, and write a short paper weekly and at least one major research paper annually; four units of mathematics, including Algebra I and II, geometry and higher; and three units of lab-based science and three of social studies that reflect the knowledge and skills required for success in college and careers.
- **Provide specific guidance for all students to take courses beyond the core** and complete a concentration in humanities, mathematics and science, or a CT concentration in a broad career field.
- **Create a refocused guidance and counseling system** that involves assigning every student to a teacher adviser who assists each student and his or her parents to: 1) set post high school goals; 2) plan a challenging program of study to achieve the goals; 3) get the help needed to succeed; and 4) annually review progress toward achieving the goals. Make the focus to help all students enroll and succeed in the advantaged academic core.
- **Weight the KEES scholarships** to rigorous course-taking patterns, not just grade-point averages.
- **Implement a system of early diagnostic assessment to determine college readiness and provide feedback** to students, parents and teachers that will help all students become college-ready and make a successful transition to the next level. This system could build upon the Statewide Public Postsecondary Placement Policy (which relies on ACT cut scores to determine levels of college readiness of **all** students) or it could embed a certain number of items in the 11th-grade Commonwealth Accountability Testing System (CATS), which would measure **all** students' readiness for college English and mathematics.
- **Strengthen strategies and policies** at the high school level to align curriculums with the readiness standards essential for access to credit-bearing college courses and help teachers understand the essential knowledge and skills, types of assignments, level of student work and kinds of assessments that are required to help students master these standards and become college-ready.
- **Use the senior year to get students ready** for the transition to postsecondary studies and a good job by enrolling seniors who have not met college-readiness standards into special readiness courses designed collaboratively between the high school and college; providing seniors who are not planning to go to college with quality CT programs that lead to certification in high-demand, good-paying jobs; and providing seniors who can meet college-readiness standards access to college credit-bearing courses through AP and dual-credit courses.

Informing students, parents and teachers about the level of preparation needed for college and career readiness — Kentucky ranks 48th in the nation in the percentage of adults ages 25 or older who have at least a high school diploma or GED credential; only 17 percent have a bachelor's degree.[37] Thus, many families have no firsthand experience with higher education. A lot of students and parents do not know about the needs of a knowledge-based economy, nor do they understand which courses in high school best prepare them for college and careers in the 21st-century work force or the amount of effort that it takes to attain this level of knowledge and skill. Further, many teachers and guidance counselors still hold an obsolete view of the workplace, what types of students go to college and what types go to work. This outdated thinking leads to focusing only on the 40 percent of students who are deemed to be college material, even though all students today need to attain the knowledge and skills required for both college and the new, knowledge-based economy.

[37] U.S. Census Bureau. *American Factfinder. Fact Sheet: Kentucky*. 2000.

Actions Kentucky can take:

- **Require students to develop six- to eight-year career pathways**[38] that include a coherent sequence of rigorous academic and career courses, commencing in the ninth grade and leading to an associate's degree, and/or industry-recognized certificate or licensure, and/or a baccalaureate degree and beyond.
- **Require community and technical colleges to help all students develop study pathways** beginning in the freshman year and leading to associate's and baccalaureate degrees and to promote these pathways.
- **Build upon Kentucky's Go Higher campaign** to help more students and their parents understand what options are available for college and careers and what is required to take advantage of these opportunities.
- **Incorporate a career-discovery experience into the ninth-grade curriculum** that provides opportunities for high school students to explore a wide range of career and educational options and that teaches them about the knowledge and skills required.
- **Establish challenging academic CT programs of study** that are organized around broad career fields and aligned to postsecondary studies and/or industry-recognized certification, with classes taught by teachers who are trained in the content area, can connect learning to real-world problems and integrate related academic content into classroom assignments. Develop alliances with professional schools — engineering, business, nursing, agriculture, etc. — to engage their faculty and outstanding high school and postsecondary teachers to design and provide AP-like training to high school and community college CT teachers.

Establishing standards for dual-credit/joint-enrollment programs — While many Kentucky high school students are earning college credit through AP, dual/joint enrollment, Web-based and other arrangements, there are few standard conditions for teaching these courses and no statewide policy for how students are admitted to these courses. Although postsecondary institutions may arrange dual-enrollment agreements with local school systems, there is no statewide policy ensuring that students have to meet the same admission requirements as college freshmen to enroll in dual-credit courses or meet common criteria in order to earn transcripted credit.[39]

As a consequence, prepared students get a jump-start on college, while unprepared students may earn college-level credit in high school only to find out later that they have to take remedial courses when they enroll in college. Many may get discouraged and not continue their studies. For example, Kentucky has more technical students than college-preparatory students enrolled in dual-credit courses, and preliminary data from a statewide study conducted by the Council on Postsecondary Education suggest that students who take dual-credit courses are more likely to enter the work force after graduation than to enroll in college.[40] Rather than addressing their academic deficiencies in the senior year, students are led to believe they are qualified and are enrolled in credit-bearing courses.

However, the state does require that high school faculty who teach dual-credit courses have the same credentials required by the Southern Association of Colleges and Schools (SACS) for college faculty. Kentucky used to require a minimum 3.0 grade-point average for students enrolling in dual-credit courses, but it has abolished that requirement.[41]

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38 A career pathway is a coherent, articulated sequence of rigorous academic and career courses, commencing in ninth grade and leading to an associate's degree, and/or an industry-recognized certificate or licensure, and/or a baccalaureate degree and beyond. It is developed, implemented and maintained in a partnership among secondary and postsecondary education, businesses and employers.

39 SREB. *High School to College and Careers: Aligning State Policies*, 2005.

40 Jim Applegate, Council on Postsecondary Education. Comments at Kentucky Education Forum, March 17, 2005.

41 Jim Applegate, Council on Postsecondary Education. Telephone Interview. July 20, 2005.

Actions Kentucky can take:

- **Apply the same college-readiness standards to dual-credit courses** as those used for enrolling freshmen in postsecondary studies, using the same assessments and/or placement exams and the same cut scores established for college readiness for college freshmen. In other words, require high school students to complete the same prerequisites for the dual-credit course taught at the high school as college students would have to meet to take the course for college credit.
- **Allow high school students to enroll in dual-credit career/technical courses during their senior year**, even if they are not deemed college-ready at the beginning of the year; at the same time, enroll them in specially developed courses in English/reading and mathematics that are designed to help them to become college-ready. Require them to pass the readiness or placement exams prior to receiving college credit for the dual-credit courses.
- **Establish criteria** for instructors, course content and assessment to ensure the equivalency of content and performance levels across the spectrum of dual-credit courses. The state can adopt an AP-like approach to all dual-credit courses — academic and career/technical — in that these courses will have common course standards, common end-of-course exams and training for faculty to teach these courses.

Getting employer-recognized industry credentials in place — In 2004, 60 percent of CT students in Kentucky's high schools did not earn an industry-endorsed skill standards certificate.[42] Many students are not earning recognized credentials unless they earn an associate's or bachelor's degree. The SREB progression rate[43] for public two year-colleges in Kentucky was 47 percent for the 2000 cohort,[44] which means that at least 53 percent did not attain a credential or associate's degree. Lack of industry credentials is an economic issue in terms of the supply of knowledgeable, skilled workers and their earning power.

Actions Kentucky can take:

- **Clarify what represents industry-recognized certification** (including an associate's degree, employer certification, apprenticeship or state-issued license) and how students can plan a program of study and begin working toward industry-recognized certification while in high school.
- **Provide information about the benefits of industry-recognized certification** to students and their parents, **encourage students to pursue certification** in high school and college; and award students at various levels along the path.
- **Provide opportunities to pursue industry-recognized certification for high-demand jobs** with strong economic outlooks and job satisfaction through career academies and dual-credit programs in partnership with community and technical colleges and businesses.
- **Establish conditions for selecting and/or developing industry certifications** that will ensure that these certifications are knowledge-based, standardized and graded independently of the school, administered on a multistate basis and recognized by industry, trade or professional associations.
- **Require CT teachers at secondary and postsecondary levels to hold equivalent certification** to ensure that they have the content knowledge necessary to prepare students to earn an industry-recognized credential.
- **Set a goal that all high school graduates will be prepared for college, for employer certification or for both**, and that some students upon graduation from high school will continue in an employer certification program until they have earned either an associate's degree or industry-recognized certification.

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[42] Kentucky, *Career and Technical Education*, op. cit.

[43] The SREB progression rate for two-year colleges and technical institutes or colleges is the percentage of the entering class who, within 150 percent of normal program time (three years for most programs) either completed degrees or certificates at or remained enrolled at their original institutions or transferred to other postsecondary institutions.

[44] SREB. *SREB Fact Book*, 2005, op. cit.

Improving high school graduation rates — In 2001, the graduation rate in Kentucky ranged from as high as 79 percent to as low as 64 percent (depending on the calculation method), and the rate declined four percentage points from 1992 to 2002,[45] based on the Manhattan Institute's computation.[46] Forty-two of Kentucky's 231 public high schools graduated no more than 60 percent of their seniors in 2002.[47] The 2003 ninth-grade enrollment in Kentucky was 14 percent higher than the eighth-grade enrollment the previous year, which means that many students failed ninth grade.[48] In 2001, Kentucky issued 7,342 GED credentials, and of these, young adults ages 16 to 19 earned 41 percent.[49] Education supports economic development, and Kentucky is not producing enough graduates to fill jobs. Of every 100 Kentucky ninth-graders, 65 will graduate from high school on time, 39 will enroll in college and only 15 will graduate from college on time.[50]

Actions Kentucky can take:

- **Require students to develop six- to eight-year career pathways** that include a coherent sequence of rigorous academic and career courses, commencing in the ninth grade and leading to an industry-recognized credential, associate's degree or baccalaureate degree.
- **Investigate the benefits of "middle college,"** where students take their courses on the college campus rather than on the high school campus, or similar initiatives designed to keep disenfranchised youth in school.
- **Set ambitious high school graduation targets for all groups of students** and make them a part of Kentucky's accountability system.
- **Focus attention on the ninth grade** by having the school's best teachers teach ninth-grade courses, connecting academic core content to the real world, introducing students to CT courses early and working with feeder middle grades schools to improve readiness for high school.
- **Require low-performing high schools to revamp their schools** to make them more relevant to and effective for students.
- **Communicate key stay-in-school messages** to students in danger of dropping out and to their families.
- **Build upon the state's GED initiatives** to help students who are on the verge of dropping out of high school earn the GED credential and an employer certification.

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45 SREB. *Getting Serious About High School Graduation. Challenge to Lead Series*. 2005.
46 ibid.
47 Johns Hopkins University. *Locating the Dropout Crisis*. 2004. (accompanying data spreadsheets)
48 SREB. *Getting Serious*, op. cit.
49 ibid.
50 Achieve, *Kentucky*, op. cit.

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